NONREDUNDANT SPLIT/POOL SYNTHESIS OF COMBINATORIAL LIBRARIES

ABSTRACT OF THE DISCLOSURE

The present invention includes methods for generating combinatorial libraries on solid phase supports in which increased productivity is achieved by pooling all common steps in synthesis without using a tracking or coding system to record the synthetic history of each compound. Methods for generating combinatorial libraries in which containers with random mixtures of solid phase particles are divided and combined together in non-random ways without the exchange of particles between containers are also provided. Various products are optionally produced in multi-stage syntheses according to the invention, such as oligomers and synthetic non-repetitive organic molecules. The methods additionally relate to the identification of each library component without adding extra synthetic, physical, optical, or electronic encoding steps during library synthesis. Combinatorial synthetic systems are also provided.

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